GLIOMAS INVOLVING THE SPLENIUM OF THE CORPUS CALLOSUM
A ROENTGENOLOGIC STUDY

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According to Ostertag, gliomas of the splenium, like other gliomas of the corpus callosum, originate in the region of the superomedial angle of the lateral ventricle. Further growth of the lesion is either systematized or irregular. Systematized growth takes place along the fibers of the corpus callosum, commissura hippocampi and fornix, which may become markedly thickened. Early infiltration of the cingular gyri appears to be the rule. Unsystematized growth may involve the thalamus, the caudate nucleus and the choroid plexus of the lateral ventricles. Sooner or later the lesions may infiltrate most of the posterior portion of both cerebral hemispheres, tumefaction of the splenium being a common property of the entire group.

The roentgenologic features are largely determined by the systematized spread of the neoplasm which, following injection of air into the ventricles or subarachnoid fluid spaces, may permit visualization of characteristically altered parts of their ventricular surfaces.

CASE REPORTS


Following air injection into the atrium of the right lateral ventricle the lateral views showed a downward displacement of the pineal body, but were otherwise non-contributory, as was the AP view.

The PA view (Fig. 1) showed the basolateral segment of the posterior portion of the right lateral ventricle only, its superomedial portion being absent. The shadow of the ventricle appeared to be displaced to the right of the median plane, and to be bounded medially by a vertical line. Due to the rotation of the head, which favoured
the right side of the skull, the degree of displacement was not fully reflected by this view. For the same reason, the pineal shadow, although displaced to the right, appeared to lie in the median plane. A soft tissue mass, possibly representing the proximal portion of the hippocampus, seemed to protrude into the lower medial portion of the ventricle. On the whole, the image of the ventricle appeared to be enlarged in spite of the absence of its superomedial portion.

At operation, a glioma occupying the depth of the left parietal lobe was found. *Autopsy* revealed spread of the lesion into the opposite hemisphere through the splenium of the corpus callosum.

Comment. The air outlined only that part of the neoplasm that had extended from the left into the right hemisphere but gave no direct informa-

![Figs. 2 and 3. Case 2. Lateral and PA views.](image)

...tion as to the location of the lesion in the former. However, the seemingly unsatisfactory ventriculogram confirmed and amplified the clinical diagnosis, as the roentgenologic findings suggested the presence of a tumor of the left occipitoparietal lobe which infiltrated the posterior portion of the corpus callosum and displaced the pineal body downward. Failure of the air to enter the third and the lateral ventricle opposite the site of air injection was attributed to marked swelling of the brain, which narrowed the interventricular foramen.

Case 2. Large glioma of splenium involving both parietal and occipital lobes. Downward and forward displacement of pineal body. Unsuccessful ventriculography, followed by lumbar air injection. Filling defect on medial side of vestibule of both lateral ventricles.

Cannulation of the brain on the left on attempted posterior parietal ventriculography yielded a few cc. of grossly hemorrhagic CSF. Lumbar encephalography was performed a few days later.

The AP views showed a slight symmetrical dilatation of both frontal horns and the ascending portions of the bodies of both lateral ventricles.